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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,991	02/16/2001	Sydney Edward Fisher	60,130-1003	3791

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EXAMINER

BOSWELL, CHRISTOPHER J

ART UNIT PAPER NUMBER

3626

DATE MAILED: 03/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/784,991

Applicant(s)

FISHER ET AL.

Examiner

Christopher Boswell

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities: spelling of the word "an" in line 8, it should be --and--. Claim 1 is also objected to for the use of "is" in line 12, this word should be --are--.

Claim 15 is objected to because of the following informalities: word usage. In lines 2 and 3 of claim 15, the phrase "measured a in first" should be --measured in a first--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,906,123 to Spurr in view of U.S. Patent Number 5,951,800 to Pettit.

Spurr discloses a vehicle door latch mechanism (figure 1) for releasably retaining a door comprising of a door latch bolt (item 12) having a closed condition capable of retaining a striker and an open condition capable of releasing the striker (figures 1 and 2), a pawl (item 16) releasably securing the latch bolt in the closed condition, and a retention plate (item 22) includes one mouth co-operating with said latch mechanism to releasably retain the striker (figure 3), and

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two pivot pin holes (figure 3) defining a pivot pin hole surface for a pivot pin, and a fixing system for fixing the latch mechanism in an operating position, the latch bolt, the pawl, and the retention plate co-operating to releasably retain the striker (figures 2 and 3). However, Spurr does not disclose the use of plurality of structural laminations for the latch bolt, the pawl, and the retention plate. Pettit teaches the use of laminates to provide favorable strength properties (column 1, lines 17-22). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to manufacture the latch, pawl, and retention plate out of laminations to further enhance the strength of the latch mechanism without adding more weight into the design.

Spurr also shows the pivot pin, as in claim 2, secured to the retention plate in the pivot hole (figure 1, items 18 and 20). Therefore it would have been obvious for someone with ordinary skill in the art at the time the invention was made to secure the pivot pin into the retention plate for addition strength and mobility.

Spurr also shows the pivot pin being mounted in a fashion that could make it pivotally mounted in the pivot hole, as in claim 3. Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to pivotally mount the pivot pin in the pivot pin hole to allow the latch or the pawl to pivot about the pivot pin.

Further modifications to Spurr's latch bolt, pawl, and retention plate according to the teachings of Pettit would make it possible to manufacture the parts using laminations. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to construct the latch bolt, pawl and retention plate using laminations, as in claims 4, 6, and 8, to increase the strength and have the weight remain the same.

Spurr discloses a latch bolt (figure 3) substantially similar in shape to that disclosed in claim 5. Included in this shape is a closed abutment surface, a first safety abutment surface for contact with the pawl of the latch mechanism, a retention surface for engagement with the striker associated with the latch mechanism and a latch pivot pin surface. Pettit teaches the use of laminations for the added strength. Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate the use of laminations into the construction of the latch bolt for the strength and weight benefits.

Spurr also discloses a pawl (figure 3) substantially similar in shape to that disclosed in claim 7. The pawl has an abutment surface for engagement with a closed abutment surface and first safety abutment surface of said latch bolt and a pawl pivot pin surface. Pettit teaches the use of laminations for added strength. Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate the use of laminations into the construction of the latch bolt for the strength and weight benefits.

Spurr shows the retention plate (figure 1) with a mouth for receiving the striker and a plate pivot pinhole, but does not disclose the laminations. Pettit discloses the use of plurality of plate laminations to provide a greater strength. Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to use the latch assembly of Spurr with the laminations to increase the strength without the increase weight.

It would have been obvious to one with ordinary skill in the art at the time the invention was made to further modify the latch assembly of Spurr in be manufactured out of a plurality of plate laminations, as disclosed by Pettit, to co-operate to provide a fixing system to secure said

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latch mechanism operably in position as disclosed by claim 10. The laminations provide strength without increasing the weight.

Spurr shows tabs (figures 2 and 3) in the latch assembly, as in claims 11-14, for the latch bolt and the pawl. Pettit teaches the use of laminations to add strength without increasing weight. Therefore it would have been obvious for one with ordinary skill in the art at the time the invention was made to use the teachings of Pettit to modify the latch assembly of Spurr to include the tabs into the assembly of the latch bolt, pawl, and the retention plate. The location of the tabs could vary from piece to piece. With the parts being made of the laminations it would be possible to vary the width of the tab to differ it from the original piece, latch bolt, pawl, or retention plate.

Spurr discloses a latch assembly for vehicular use, but does not disclose the material of which the latch assembly would be manufactured. Pettit discloses the use of metal, preferably aluminum to use as the material for the laminates (column 3, lines 10-11). Grain structure is considered inherent in aluminum and steel. Therefore it would have been obvious to one with ordinary skill at the time the invention was made to further modify the latch assembly of Spurr to be manufactured out of a metal with a grain structure such as aluminum or steel.

Spurr discloses the use of a molded plastic housing (column 2, line 14) in conjunction with the latch assembly, as in claims 19 and 20. Pettit discloses the use of laminations to improve the strength of an object without the accrual of weight. Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to further modify the latch of Spurr to include a molded plastic housing over the plurality of laminations in the latch assembly. The plastic housing can be used to dampen noises associated with a latch in the

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opening and closing of the given door. The molded plastic can also be used to partially secure the latch mechanism.

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spurr in view of Pettit as applied to claim 1 above, and further in view of U.S. Patent Number 6,025,048 to Cutler et al.

Spurr discloses a latch assembly substantially similar to that of the claimed latch mechanism with the exception of the laminations used in the product. Pettit discloses the use of laminations to achieve a greater strength without obtaining a greater weight but fails to disclose if the laminations are non-homogeneous in that a strength of the lamination are measured in a first direction are different from a strength of the lamination as measured in a second direction. Pettit does not disclose the direction the laminates are assembled according to the strengths of the first and second laminations. Cutler discloses a laminate in which the fibers of the laminate are aligned either unidirectionally or multidirectionally within the laminate layers (column 2, lines 21-24). Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to further modify the teachings of Spurr and Pettit in include fiber structure in the laminates. It is inherent that a fiber would be stronger in the transversal direction than in the lateral direction. Thus making the fiber laminate non-homogeneous in the direction the strength would be measured. Further more if the fibers in the laminations were aligned unidirectionally it would be inherent that the laminations could then be aligned in the direction of the respective strength directions. It would also then be possible to miss-align the laminates according to the desired results.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to latches and spring bias detents in general:

U.S. Patent Number 6,024,389 to Arabia, Jr. et al. disclosing a vehicle door latch

U.S. Patent Number 6,003,910 to Dupont et al. disclosing a lock for a vehicle door

U.S. Patent Number 5,554,430 to Pollatta et al. disclosing laminate designs and assemblies

U.S. Patent Number 5,547,735 to Roebroeks et al. disclosing directional laminates


U.S. Patent Number 4,896,908 to Kleefeldt disclosing a vehicle door latch

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Boswell whose telephone number is (703) 305-4067. The examiner can normally be reached on 8:30 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (703) 308-3179. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 308-7687 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.



Anthony Knight
Supervisory Patent Examiner
Technology Center 3600

cjb
March 4, 2002